

WHAT IS CLAIMED IS:

1 ~~Sub 3.1~~ A dynamic damper, comprising:
2 a mass member assembly including a plurality of discrete mass
3 ^{1,2} members, each mass member having an inner ¹⁶ surface, an outer ¹⁴ surface, and an
4 affixing ¹⁸ member for affixing the mass member ^{1,2} to another mass member of the
5 assembly, the mass member assembly being affixable to a rotary shaft.

6 ~~2.~~ A dynamic damper as in claim 1, wherein the affixing member ¹⁸
7 comprises a tab ²⁰ for receipt by a mated receptacle of another mass member.

8 ~~3.~~ A dynamic damper as in claim 1, wherein the affixing member ¹⁸
9 comprises a receptacle for receipt by a mated tab ²⁰ of another mass member.

10 ~~Sub 3.4~~ A dynamic damper, comprising:
11 a mass member assembly including a plurality of mass members, ^{1,2}
12 each mass member having an inner surface and an outer surface, the mass member
13 assembly being affixable to a rotary shaft; and
14 a plurality of elongated connecting members each extending radially
15 inwardly from the inner surface of each mass member toward the rotary shaft thereby
16 defining a plurality of spaced apart attachment ³⁰ surfaces, wherein each of the plurality
17 of spaced apart attachment ³⁰ surfaces secures the damper in the closed position to the
18 rotary shaft ²⁸, the mass member assembly being spaced apart from the rotary shaft and
19 being supported by the connecting members ²⁴ directly contacting the shaft to allow the
20 mass member assembly to vibrate by resonance, and the connecting members being
21 subjected substantially to compressive deformation between the mass member
22 assembly and the rotary shaft.

23 ~~5.~~ A dynamic damper as in claim 4, wherein the rotary shaft ²⁸
24 has a central axis of rotation and each of the plurality of spaced apart attachment surfaces ³⁰
25 is aligned in a direction substantially parallel thereto.

26 ~~Sub 3.16.~~ A dynamic damper as in claim 4, wherein the connecting ²⁴

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27 members are equidistantly spaced apart from each other along the inner surface of the
28 cylindrical mass.

29 (7) A dynamic damper as in claim 4, wherein the connecting²⁴
30 members are formed from an elastic material

31 (8) A dynamic damper as in claim 7, wherein the elastic
32 material is rubber.

33 ~~sub B3~~ (9) A dynamic damper as in claim 1, wherein the mass member¹²
34 is insert molded integrally with the connecting²⁴ members.

35 (10) A dynamic damper as in claim 4, wherein the connecting²⁴
36 members are generally rectangular in shape and extend along at least 25% of the
37 inner surface¹⁶ of the mass member¹².

38 (11) A dynamic damper as in claim 1, wherein the mass member
39 assembly is cylindrical in shape when in the assembled position.

40 12. A dynamic damper as in claim 1, further comprising:
41 a housing affixable to the mass member assembly when the mass
42 member assembly is in the assembled position to further secure the mass member
43 assembly to the rotary shaft.

44 13. A dynamic damper as in claim 12, wherein the housing is
45 substantially cylindrical in shape.

46 14. A dynamic damper as in claim 13, wherein the housing is
47 formed from a metallic material.

48 15. A dynamic damper as in claim 14, wherein the housing is
49 formed from a plastic material.

50 16. A dynamic damper as in claim 14, wherein the housing is
51 formed from an elastic material.

52 17. A dynamic damper as in claim 14, wherein the housing
53 envelopes substantially all of the outer surface of the mass member assembly when
54 the mass member assembly is in the assembled position.

55 18. A dynamic damper as in claim 14, wherein the housing is
56 formed from a heat shrinkable material.

57 19. A dynamic damper as in claim 14, wherein the housing is an
58 annular ring.
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